Pengaruh kombinasi suplementasi vitamin E dan C terhadap kadar malondial dehida plasma pada usia lanjut dengan hiperkolesterolemia

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Abstrak

Penelitian uji klinis paralel, tertutup tunggal, alokasi acak, untuk membandingkan kadar malondialdehida usila 260 tahtm dcngan hiperkolestcrolcmia yang mendapatkan kombinasi suplementasi vitamin E 400 IU dan vitamin C 500 mg, masing-masing sebutir sehari selama 45 hari dengan kelompok yang mendapat vitamin E 400 IU dan plasebo.Terdapat 42 subyek penelitian yang herasal dari Yayasan Kebagusan, Yayasan Yasni, dan Yayasan Yakin, Pasar Minggu Jakarta Selatan yang dibagi menjadi dua kelompok masing-masing benjurnlah 21 orang. Data yang diambil adalah : data demografi, antropometri, data asupan makanan pada minggu pertama, ketiga dan ketujuh, kadar kolesterol LDL dan MDA plasma sebclum dan sesudah perlakuan. Uji statistik yang digunakan adalah uji t-tidak berpasangan bila distribusi normal dan uji Mann-whitney bila distrihusi tidak nom1aI dcngan tingkat kernaknaan p<0.05.

Sebanyak 20 subyek penelitian dari masing-masing kelompok yang dapat mengikuti penelitian sampai selesai. Sebeltun perlakuan, nilai median kadar kolesterol LDL kelompok vitamin E+plasebo dan vitamin E4-C masing- masing adalah l46.50(l30-190) mg/dL dan l46.50(l3l-196) mg/dL. Setelah 45 hari perlakuan, rerata kadar kolesterol LDL kelompok vitamin E+plasebo (151.9:l:22.l mg/dl.) meningkat sedangkan kelompok vitamin E+C (l46.8:b28.2l mg/dL) menurun. Sebelum perlakuan, nilai median kadar MDA plasma kelompok vitamin E+plasebo dan rerata kadar MDA plasma kelompok vitamin E-+C masing-musing adalah 2.63(l .92-4.42) nmol/mL dan 3.03=h0.62 nmol/mL. Setelah 45 hari perlakuan rerata kadar MDA plasma kedua kelompok mcnurun menjadi 2.30:h0.67 nmol/mL (p<0.0l) pada kelompok vitamin E+plasebo dan 2.88i:0.88 mnol/mL (p=0.36) untuk kelompok vitamin E+C. Penurunan kadar MDA plasma kelompok vitamin E+plaseb0 lebih besar (-0.5=\=0.55 nmol/mL) daripada kclompok vitamin E+C (-0.28(1.3l-1.63) nmol/mL), tetapi dengan uji statistik terhadap kedua nilai tersebut, tidak berbeda berma.kna(p=0.09). Pemberian kombinasi vitamin E dan vitamin C pada usila dengan hiperkolesterolemia tidak dapat menurunkan kadar MDA plasma lebih besar dibandingkan dcngan hanya pemberian vitamin E.

Usia lanjut, hipcrkolcstcrolcmia, vitamin E, vitamin C, malondiaidehida.

.....The eH'ect of combined supplementation of vitamin E and C on plasma Malondyaldehyde level elderly with hypercholesterolemic. To know the effect of combined supplementation of vitamin E and C in lipid peroxidation in hypercholesterolemic elderly. This parallel, single blind, randomization clinical trial purpose was to compare plasma malondyaldehyde level in hypercholesterolemic elderly aged more than 60 years old. Forty two people Hom Yayasan Kebagusan, Yayasan Yasni and Yayasan Yakin, Pasar Minggu, South Jakarta which participated the study, were divided into two groups. Twenty one elderly were supplemented with 400 IU vitamin E and 500 mg vitamin C for 45 consecutive days, while the other group was supplemented with 400 IU vitamin E and placebo. The data of demographic, anthropometrics, food intake in the first, third and seventh weeks, plasma LDL and MDA levels before and aller period were taken. Statistical analyzes was perfonned by SPSS 11.5.

Twenty people for each group had followed the study until the end of period. Before study, LDL cholesterol

median for vitamin E + placebo group and vitamin E+C group were l46.SO(I30-190) mg/dL and l46.50{l30»l90) mg/dL respectively. After 45 of days treatment, there was an increase in mean LDL cholesterol in vitamin E + placebo group l5l.9:l:22.l mg/dl, while in vitamin E+C group was decreased to l46.8i28.2I mg/dL. Before study, plasma MDA level in vitamin E -I- placebo group and vitamin E+C group were 2.63(l .92-4.42) and 3.03i0.62 nmol/mL, respectively. Alter 45 days, mean MDA plasma in vitamin E + placebo group was 2.30-£0.67 nmol/mL (p<0.0l) and was 2.88:t0.88 nmol/mL (p=0.36) in vitamin E+C group. The decreased on plasma MDA levels in vitamin Er*-placebo group was higher (-0510.55 nmol/mL) than vitamin E+C (-0.28(l.31-1.63) nmol/mL), but statistical test showed not significant different between both group (p=0.09). Combined supplementation vitamin E and vitamin C in hypercholesterolemic elderly eouldnot decrease plasma MDA higher than supplementation of vitamin E alone.